LONDON-WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA4 | Kilburn (Brent) to Old Oak Common

Operational assessment (SV-004-004)

Sound, noise and vibration

November 2013

VOL 5

ES 3.5.2.4.11

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Department for Transport

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Appendix SV-004-004

Environmental topic:	Sound, noise and vibration	SV
Appendix name:	Operation assessment	004
Community forum area:	Kilburn (Brent) to Old Oak Common	004

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1 Introduction

1.1 Structure of the sound, noise and vibration appendices

1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these details the methodology used (Appendix SV-001-000) and relates to the sound, noise and vibration assessment for all community forum areas (CFA).

1.1.2 For the Kilburn (Brent) to Old Oak Common community forum area (CFA04), the other three sections are as follows:

- baseline sound, noise and vibration (Appendix SV-002-004);
- construction sound, noise and vibration (Appendix SV-003-004); and
- operational sound, noise and vibration (Appendix SV-004-004) (this appendix).

1.1.3 The outcomes of this assessment are summarised in Volume 2: CFA04 Report, Chapter 11 Sound, Noise and Vibration.

1.1.4 Maps referred to throughout the sound, noise and vibration appendices are contained in the Volume 5 sound, noise and vibration map book.

1.1.5 This appendix presents the likely noise and vibration impacts, effects and significant effects associated with the operation of the Proposed Scheme for the Kilburn (Brent) to Old Oak Common area on:

- people, primarily where they live ('residential receptors') in terms a) individual dwellings and b) on a wider community basis, including any shared community spaces; and
- community facilities such as schools, hospitals, places of worship, and also commercial properties such as offices and hotels, collectively described as 'non-residential receptors' and 'quiet areas'.

1.1.6 The assessment of likely impacts, effects and significant effects from operational noise and vibration on agricultural, community, ecological or heritage receptors and the assessment of tranquillity are presented in the following documents within Volume 5:

- Community — Appendix CM-001-004
- Ecology — Appendix EC-005-001
- Heritage — Appendix CH-003-004
- Landscape and Visual — Appendix LV-001-004

1.2 Evaluation of impacts and effects

1.2.1 This appendix provides a quantitative assessment of operational noise and vibration impacts and effects and a qualitative assessment of likely significant effects, based on the impacts and effects identified and other local context information consistent with the scope and methodology defined for the Proposed Scheme.

1.2.2 Indirect effects arising from permanent changes in traffic patterns on the existing road and rail networks as a consequence of the Proposed Scheme are also reported in this appendix, where they would occur within the study area as defined in Volume 5: Appendix SV-001-000.

1.2.3 Route-wide impacts, effects and significant effects associated with noise or vibration from the operation of the Proposed Scheme are reported in Volume 3.

1.2.4 Off-route effects of noise or vibration arising from the operation of the Proposed Scheme, including those likely to arise from permanent changes in traffic patterns on roads or railways outside of the study area for direct effects are reported in Volume 4.

1.2.5 In undertaking the assessment of sound, noise and vibration, consistent with EIA Regulations and emerging National Planning Practice Guidance[1] a differentiation between impacts effects, adverse effects and significant effects is made. Further information is provided in Volume 5: Appendix SV001-000.

1.2.6 The assessment of impacts has been undertaken at assessment locations that are representative of a number of dwellings or other sensitive receptors. The Assessment Locations employed in this assessment are presented on map series Sv-02 in the CFA04 Volume 5 sound, noise and vibration map book.

[1] National Planning Practice Guidance – Noise http://planningguidance.planningportal.gov.uk ; refer to the table summarising noise exposure hierarchy

2 Scope, assumptions and limitations

2.1 Regional and local policy guidance

2.1.1 The policy framework for sound, noise and vibration is set out in Volume 1 and in Appendix SV-001-000. As part of the engagement with local authorities through the Planning Forum Sub Group (Acoustics) information regarding any specific local planning guidance in respect of noise and vibration has been requested. Whilst no information has been received for this study area via the Planning Forum Sub Group (Acoustics) the following local policy guidance on noise and vibration has been identified:

- Brent Unitary Development Plan - 2004;
- Kensington and Chelsea Unitary Development Plan - 2002 to Dec 2010;
- Kensington and Chelsea Core Strategy (Local Development Framework) - Dec 2010;
- Ealing Unitary Development Plan - 2002 to 2017;
- Hammersmith Unitary Development Plan - Aug 2003 to July 2013;
- Hammersmith Core Strategy - Oct 2011;
- Hammersmith Local Development Management Plan - July 2013;
- City of Westminster Unitary Development Plan - Jan 2007;
- City of Westminster Core Strategy - Jan 2011; and
- Camden Local Development Framework - Nov 2010.

2.1.2 This guidance has been considered as part of formulating the detailed application of the impact and significance criteria set out in Volume 5: Appendix SV-001-000.

2.2 Engagement

2.2.1 Details of engagement on a route-wide basis with the local and county authorities' Environmental Health Practitioners via the Planning Forum Sub Group - Acoustics, is set out in Volume 1, Section 8.

2.2.2 Engagement with communities has been via the Community Forums, as set out in Volume 1. In respect of sound, noise and vibration the following discussions have taken place:

- general discussions in respect of local issues, including possible ways to avoid and mitigate the potential impacts of noise or vibration
- September / October 2012; a specific presentation about sound, noise and vibration with discussion afterwards with one of the project team specialists;
- November / December 2012; specific request for the Community Forum to propose baseline sound monitoring locations;
- January / February 2013; feedback to the Community Forum on any proposed baseline monitoring locations; and
- verbal / written response to questions on sound, noise and vibration.

2.3 Methodology

2.3.1 The methodology used for the assessment of airborne sound, ground-borne sound and vibration impacts and the determination of significant effects is defined in the Scope and Methodology Report (SMR) (Volume 5: Appendix CT-001-000/1), is clarified in a number of areas by the SMR addendum (Volume 5: Appendix CT-001-000/2). Further information is contained in Volume 5: Appendix SV-001-000.

2.4 Assumptions

2.4.1 Route-wide assumptions are outlined in Volume 1, Section 8, and are further detailed in Volume 5: Appendix SV-001-000. Local assumptions that apply to the assessment of operational sound noise and vibration within this CFA are set out in Volume 2: Report 04.

2.5 Local Limitations

2.5.1 In this area, there are a number of locations where the land or property owners did not permit baseline sound level monitoring to be undertaken at their premises. However, sufficient information has been obtained to undertake the assessment. Further information is provided in Volume 5: Appendix SV-002-000.

3 Environmental baseline

3.1 Existing baseline

3.1.1 Baseline sound level data has been collected at locations representative of the airborne sound-sensitive receptors. The existing and future baseline airborne sound levels derived from these measurements are included within Table 3. Details of the baseline data collection and the methodology are given in Volume 5: Appendix SV-001-000 and specifically for this study area in Volume 5: Appendix SV-002-005.

3.1.2 The majority of receptors adjacent to the line of the route are not currently subject to appreciable vibration and therefore vibration at all receptors has been assessed using the absolute vibration criteria as described in Volume 5: Appendix SV-001-000.

3.2 Future baseline

3.2.1 The assessment is based upon the predicted change in sound levels that result from the Proposed Scheme. The assessment initially considered a reasonable worst case (that would overestimate the change in levels) by assuming that sound levels would not change from the existing baseline year of 2012/2013. Where significant effects were identified on this basis, the effects have been assessed using the baseline year of 2026 to coincide with the proposed start of passenger services. The future baseline is for the sound environment that would exist in 2026 without the Proposed Scheme.

4 Effects arising during operation

4.1 Introduction

4.1.1 The assessment is reported first for ground-borne sound and vibration and then for airborne sound. Under each of these headings, the results of the quantitative identification of impacts and effects are presented. This is followed by the identification of significant effects and the evidence used to support these conclusions.

4.1.2 The structure of this assessment report is:

- Avoidance and mitigation measures
- Quantitative identification of impact and effects
  - Ground-borne sound and vibration
    - Residential
    - Non-residential
  - Airborne sound
    - Residential
    - Non-residential
- Assessment of impacts and effects
  - Residential receptors: direct effects – dwellings
  - Residential receptors: direct effects – communities
  - Residential receptors: indirect effects
  - Non-residential receptors: direct effects
  - Non-residential receptors: indirect effects
  - Cumulative effects from the proposed scheme and other committed development.

4.2 Avoidance and mitigation measures

4.2.1 These are set out in Volume 2: Report 04.

4.3 Quantitative identification of impacts and effects

Ground-borne sound and vibration

4.3.1 Assessment locations defined for the quantitative assessment of impacts are shown on map series SV-02 in the CFA04 Volume 5 sound, noise and vibration map book.

4.3.2 For each Assessment Location, the assessment results for residential and non-residential receptors are presented in Table 1. Explanation of the information in Table 1 is provided in Appendix SV-001-000, with the following additional notes.

B	For non-residential receptors further detail about the type of effect is set out in the text of Volume 5: Appendix SV-001-000.
NA	Type of effect - Generally no adverse effect
A	Type of effect - Adverse effect
S	Type of effect - Significant adverse effect
VDV	Vibration Dose Value
~	The forecast adverse effects are not considered to be significant on a community basis (further information on methodology is provided in Volume 5: Appendix SV-001-000).
^	The impact methodology has identified a potential significant effect at this receptor which based upon further qualitative information is not considered to be a likely significant effect. Please refer the end of this Appendix for further information.
	Where the significant effect column is highlighted in pink, then a significant effect is identified at the referenced residential community area, or individual receptor.
	Yellow denotes a low ground-borne noise impact or a minor ground-borne vibration impact
	Orange denotes a medium ground-borne noise impact or a moderate ground-borne vibration impact
	Red denotes a high ground-borne noise impact or a major ground-borne vibration impact
	Dark red denotes a very high ground-borne noise impact

Table 1: Ground-borne sound and vibration levels, noise and vibration impacts and effects

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620001	Wells House Road, London (also committed development ref CFA4/42)	5	0.02	0.01	-	8 (8)	NA	R (CD)	T	-	-	-	-	
620004	Wells House Road, London	11	0.02	0.01	-	8	NA	R	T	-	-	-	-	
620005	Wells House Road, London	18	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620006	Wells House Road, London	8	0.02	0.01	-	15	NA	R	T	-	-	-	-	
620081	Midland Terrace, London	8	0.02	0.01	-	1	NA	R	T	-	-	-	-	
620095	School Road, London	5	0.01	0.01	-	1	NA	R	T	-	-	-	-	
620110	Midland Terrace, London	4	0.01	0.01	-	7	NA	R	T	-	-	-	-	
620151	Scrubs Lane, London	3	0.01	0.01	-	3	NA	R	T	-	-	-	-	
620183	Bayford Road, London	7	0.03	0.02	-	5	NA	R	T	-	-	-	-	
620185	Rainham Road, London	6	0.02	0.01	-	4	NA	R	T	-	-	-	-	
620187	Rainham Road, London	6	0.03	0.01	-	9	NA	R	T	-	-	-	-	
620188	Rainham Road, London	9	0.03	0.01	-	7	NA	R	T	-	-	-	-	
620189	Harrow Road, London	17	0.04	0.02	-	4	NA	R	T	-	-	-	-	
620190	Rainham Road, London	19	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620191	Harrow Road, London	20	0.06	0.03	-	12	NA	R	T	-	-	-	-	
620193	Rainham Road, London	10	0.03	0.02	-	11	NA	R	T	-	-	-	-	
620194	Rainham Road, London	19	0.05	0.02	-	6	NA	R	T	-	-	-	-	
620195	Harrow Road, London	18	0.05	0.03	-	2	NA	R	T	-	-	-	-	
620196	Berens Road, London	16	0.05	0.02	-	4	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620197	Berens Road, London	14	0.04	0.02	-	10	NA	R	T	-	-	-	-	
620198	Bayford Road, London	10	0.03	0.02	-	7	NA	R	T	-	-	-	-	
620199	Pember Road, London	19	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620200	Berens Road, London	6	0.03	0.01	-	9	NA	R	T	-	-	-	-	
620201	Berens Road, London	12	0.04	0.02	-	10	NA	R	T	-	-	-	-	
620202	Halstow Road, London	17	0.04	0.02	-	2	NA	R	T	-	-	-	-	
620203	Berens Road, London	21	0.07	0.03	-	13	NA	R	T	-	-	-	-	
620204	Berens Road, London	15	0.05	0.02	-	3	NA	R	T	-	-	-	-	
620207	Pember Road, London	21	0.07	0.03	-	6	NA	R	T	-	-	-	-	
620208	Pember Road, London	16	0.05	0.02	-	1	NA	R	T	-	-	-	-	
620209	Warfield Road, London	13	0.04	0.02	-	11	NA	R	T	-	-	-	-	
620210	Warfield Road, London	11	0.04	0.02	-	5	NA	R	T	-	-	-	-	
620211	Harrow Road, London	11	0.03	0.02	-	6	NA	R	T	-	-	-	-	
620216	Pember Road, London	11	0.04	0.02	-	26	NA	R	T	-	-	-	-	
620217	Warfield Road, London	9	0.03	0.02	-	38	NA	R	T	-	-	-	-	
620218	Kilburn Lane, London	13	0.05	0.02	-	13	NA	R	T	-	-	-	-	
620223	Pember Road, London	15	0.05	0.03	-	2	NA	R	T	-	-	-	-	
620224	Pember Road, London	14	0.05	0.02	-	2	NA	R	T	-	-	-	-	
620225	Pember Road, London	13	0.04	0.02	-	2	NA	R	T	-	-	-	-	
620226	Pember Road, London	13	0.04	0.02	-	20	NA	R	T	-	-	-	-	
620227	Buller Road, Queens Park	12	0.04	0.02	-	4	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620228	Buller Road, London	14	0.05	0.02	-	7	NA	R	T	-	-	-	-	
620230	Buller Road, London	16	0.06	0.03	-	5	NA	R	T	-	-	-	-	
620231	Buller Road, London	19	0.06	0.03	-	2	NA	R	T	-	-	-	-	
620232	Compton Road, London	20	0.07	0.03	-	2	NA	R	T	-	-	-	-	
620238	Pember Road, London	21	0.07	0.03	-	8	NA	R	T	-	-	-	-	
620239	Compton Road, London	21	0.08	0.04	-	2	NA	R	T	-	-	-	-	
620241	Compton Road, London	16	0.06	0.03	-	2	NA	R	T	-	-	-	-	
620242	Halstow Road, London	19	0.05	0.02	-	5	NA	R	T	-	-	-	-	
620243	Wakeman Road, London	6	0.03	0.01	-	10	NA	R	T	-	-	-	-	
620247	Wakeman Road, London	7	0.04	0.02	-	8	NA	R	T	-	-	-	-	
620248	Compton Road, London	16	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620249	Compton Road, London	19	0.06	0.03	-	2	NA	R	T	-	-	-	-	
620250	Compton Road, London	16	0.06	0.03	-	2	NA	R	T	-	-	-	-	
620251	Compton Road, London	19	0.06	0.03	-	4	NA	R	T	-	-	-	-	
620252	Buller Road, London	17	0.06	0.03	-	2	NA	R	T	-	-	-	-	
620253	Buller Road, London	23	0.08	0.04	-	4	NA	R	T	-	-	-	-	
620256	Wakeman Road, London	11	0.04	0.02	-	4	NA	R	T	-	-	-	-	
620257	Wakeman Road, London	12	0.04	0.02	-	1	NA	R	T	-	-	-	-	
620259	Chamberlayne Road, London	18	0.05	0.03	-	26	NA	R	T	-	-	-	-	
620290	Kilburn Lane, London	13	0.05	0.02	-	1	NA	R	T	-	-	-	-	
620291	Wakeman Road, Queens Park	7	0.04	0.02	-	11	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620293	Kilburn Lane, London	9	0.05	0.02	-	176	NA	R	T	-	-	-	-	
620300	Salusbury Road, London	13	0.05	0.02	-	6	NA	R	T	-	-	-	-	
620311	Salusbury Road, London	9	0.05	0.02	-	5	NA	R	T	-	-	-	-	
620314	Salusbury Road, London (also committed development ref CFA4/10)	17	0.07	0.03	-	31 (>31)	NA	R (CD)	T	-	-	-	-	
620319	Albert Road, London	16	0.06	0.03	-	73	NA	R	T	-	-	-	-	
620320	Kilburn Lane, London	18	0.07	0.04	-	17	NA	R	T	-	-	-	-	
620321	Claremont Road, London	19	0.06	0.03	-	28	NA	R	T	-	-	-	-	
620322	Kilburn Lane, London	18	0.07	0.04	-	48	NA	R	T	-	-	-	-	
620323	Kilburn Lane, London	20	0.08	0.04	-	5	NA	R	T	-	-	-	-	
620324	Chamberlayne Road, Queens Park	20	0.07	0.04	-	31	NA	R	T	-	-	-	-	
620325	Kilburn Lane, London	20	0.06	0.03	-	13	NA	R	T	-	-	-	-	
620326	Oliphant Street, London	23	0.10	0.05	-	25	NA	R	T	-	-	-	-	
620327	Oliphant Street, London	18	0.07	0.04	-	8	NA	R	T	-	-	-	-	
620328	Oliphant Street, London	21	0.09	0.04	-	5	NA	R	T	-	-	-	-	
620329	Peach Road, London	23	0.10	0.05	-	5	NA	R	T	-	-	-	-	
620330	Peach Road, London	22	0.09	0.04	-	4	NA	R	T	-	-	-	-	
620331	Sixth Avenue, London	22	0.09	0.05	-	3	NA	R	T	-	-	-	-	
620332	Oliphant Street, London	13	0.05	0.02	-	7	NA	R	T	-	-	-	-	
620333	Oliphant Street, London	13	0.05	0.02	-	3	NA	R	T	-	-	-	-	
620334	Peach Road, London	13	0.05	0.02	-	5	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620336	Sixth Avenue, London	13	0.05	0.02	-	9	NA	R	T	-	-	-	-	
620337	Oliphant Street, London	18	0.07	0.04	-	8	NA	R	T	-	-	-	-	
620338	Sixth Avenue, London	15	0.06	0.03	-	8	NA	R	T	-	-	-	-	
620339	Marne Street, London	13	0.05	0.02	-	16	NA	R	T	-	-	-	-	
620340	Nutbourne Street, London	15	0.05	0.03	-	17	NA	R	T	-	-	-	-	
620341	Nutbourne Street, London	17	0.07	0.03	-	18	NA	R	T	-	-	-	-	
620342	Oliphant Street, London	22	0.09	0.04	-	20	NA	R	T	-	-	-	-	
620343	Sixth Avenue, London	23	0.10	0.05	-	8	NA	R	T	-	-	-	-	
620344	Oliphant Street, London	23	0.10	0.05	-	27	NA	R	T	-	-	-	-	
620345	Kilburn Lane, London	20	0.06	0.03	-	25	NA	R	T	-	-	-	-	
620351	Sixth Avenue, London	13	0.05	0.02	-	2	NA	R	T	-	-	-	-	
620352	Fifth Avenue, London	13	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620360	Nutbourne Street, London	13	0.05	0.02	-	11	NA	R	T	-	-	-	-	
620361	Fifth Avenue, London	16	0.06	0.03	-	12	NA	R	T	-	-	-	-	
620362	Third Avenue, London	15	0.06	0.03	-	11	NA	R	T	-	-	-	-	
620363	Third Avenue, London	13	0.05	0.02	-	10	NA	R	T	-	-	-	-	
620364	Fifth Avenue, London	16	0.06	0.03	-	8	NA	R	T	-	-	-	-	
620365	Fifth Avenue, London	18	0.07	0.04	-	12	NA	R	T	-	-	-	-	
620366	Fifth Avenue, London	25	0.11	0.05	-	8	NA	R	T	-	-	-	-	
620367	Kilburn Lane, London	22	0.09	0.05	-	10	NA	R	T	-	-	-	-	
620368	Beethoven Street, London	17	0.07	0.03	-	1	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620369	Kilburn Lane, London	15	0.06	0.03	-	58	NA	R	T	-	-	-	-	
620370	Allington Road, London	13	0.05	0.02	-	47	NA	R	T	-	-	-	-	
620371	Kilburn Lane, London	14	0.05	0.03	-	32	NA	R	T	-	-	-	-	
620372	Allington Road, London	13	0.05	0.02	-	9	NA	R	T	-	-	-	-	
620373	Kilburn Lane, London	13	0.05	0.02	-	10	NA	R	T	-	-	-	-	
620374	Beethoven Street, London	23	0.10	0.05	-	14	NA	R	T	-	-	-	-	
620375	Herries Street, London	22	0.09	0.05	-	16	NA	R	T	-	-	-	-	
620376	Kilburn Lane, London	15	0.06	0.03	-	12	NA	R	T	-	-	-	-	
620394	Herries Street, London	20	0.08	0.04	-	4	NA	R	T	-	-	-	-	
620395	Herries Street, London	18	0.07	0.04	-	2	NA	R	T	-	-	-	-	
620397	Verdi Crescent, London	16	0.06	0.03	-	49	NA	R	T	-	-	-	-	
620399	Verdi Crescent, London	18	0.07	0.03	-	10	NA	R	T	-	-	-	-	
620400	Dowland Street, London	14	0.05	0.03	-	4	NA	R	T	-	-	-	-	
620401	Dowland Street, London	13	0.05	0.02	-	1	NA	R	T	-	-	-	-	
620402	Dowland Street, London	13	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620407	Kilburn Lane, London	14	0.05	0.03	-	1	NA	R	T	-	-	-	-	
620410	Kilburn Lane, London	18	0.07	0.03	-	12	NA	R	T	-	-	-	-	
620411	Bravington Road, London	15	0.05	0.03	-	7	NA	R	T	-	-	-	-	
620412	Bravington Road, London	16	0.06	0.03	-	8	NA	R	T	-	-	-	-	
620416	Portnall Road, London	14	0.05	0.03	-	9	NA	R	T	-	-	-	-	
620418	Kilburn Lane, London	15	0.05	0.03	-	12	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV m/s$^{1.75}$ Daytime (07:00 – 23:00)	VDV m/s$^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620419	Portnall Road, London	13	0.05	0.02	-	6	NA	R	T	-	-	-	-	
620434	Denmark Road, London	13	0.05	0.02	-	74	NA	R	T	-	-	-	-	
620440	Albert Road, London	17	0.06	0.03	-	20	NA	R	T	-	-	-	-	
620441	Rupert Road, London	14	0.05	0.03	-	16	NA	R	T	-	-	-	-	
620447	Albert Road, London (also committed development ref CFA4/9)	17	0.07	0.03	-	10 (>10)	NA	R (CD)	T	-	-	-	-	
620450	Albert Road, London	16	0.06	0.03	-	64	NA	R	T	-	-	-	-	
620451	Canterbury Terrace, London	17	0.06	0.03	-	16	NA	R	T	-	-	-	-	
620452	Kilburn Lane, London	18	0.07	0.04	-	9	NA	R	T	-	-	-	-	
620453	Kilburn Lane, London	14	0.05	0.03	-	11	NA	R	T	-	-	-	-	
620454	Oliphant Street, London	18	0.07	0.03	-	9	NA	R	T	-	-	-	-	
620455	Oliphant Street, London	14	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620456	Oliphant Street, London	18	0.07	0.04	-	8	NA	R	T	-	-	-	-	
620457	Oliphant Street, London	14	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620458	Peach Road, London	18	0.07	0.03	-	8	NA	R	T	-	-	-	-	
620459	Peach Road, London	14	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620460	Peach Road, London	18	0.07	0.04	-	8	NA	R	T	-	-	-	-	
620461	Peach Road, London	14	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620462	Sixth Avenue, London	18	0.07	0.04	-	8	NA	R	T	-	-	-	-	
620463	Sixth Avenue, London	14	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620467	Oliphant Street, London	15	0.06	0.03	-	11	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV m/s$^{1.75}$ Daytime (07:00 – 23:00)	VDV m/s$^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620469	Oliphant Street, London	15	0.06	0.03	-	28	NA	R	T	-	-	-	-	
620470	Kilburn Lane, London	16	0.06	0.03	-	11	NA	R	T	-	-	-	-	
620475	Third Avenue, London	18	0.07	0.03	-	20	NA	R	T	-	-	-	-	
620476	Beethoven Street, London	14	0.05	0.03	-	2	NA	R	T	-	-	-	-	
620479	Third Avenue, London	13	0.05	0.02	-	9	NA	R	T	-	-	-	-	
620480	Bravington Road, London	13	0.05	0.02	-	12	NA	R	T	-	-	-	-	
620481	Bravington Road, London	13	0.05	0.02	-	13	NA	R	T	-	-	-	-	
620485	Neville Road, London	14	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620486	Kilburn Lane, London	15	0.05	0.03	-	6	NA	R	T	-	-	-	-	
620487	Chamberlayne Road, London	14	0.05	0.02	-	16	NA	R	T	-	-	-	-	
620488	Chamberlayne Road, London	15	0.05	0.03	-	24	NA	R	T	-	-	-	-	
620489	Kilburn Lane, London	13	0.04	0.02	-	24	NA	R	T	-	-	-	-	
620490	Pember Road, London	17	0.05	0.03	-	8	NA	R	T	-	-	-	-	
620491	Compton Road, London	13	0.04	0.02	-	4	NA	R	T	-	-	-	-	
620492	Halstow Road, London	14	0.04	0.02	-	9	NA	R	T	-	-	-	-	
620493	Halstow Road, London	14	0.04	0.02	-	10	NA	R	T	-	-	-	-	
620494	Rainham Road, London	12	0.04	0.02	-	4	NA	R	T	-	-	-	-	
620495	Rainham Road, London	14	0.04	0.02	-	8	NA	R	T	-	-	-	-	
620496	Harrow Road, London	12	0.03	0.02	-	5	NA	R	T	-	-	-	-	
620497	Canterbury Terrace, London	18	0.07	0.03	-	8	NA	R	T	-	-	-	-	
620498	Canterbury Terrace, London	19	0.07	0.04	-	24	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620499	Canterbury Terrace, London	13	0.05	0.02	-	32	NA	R	T	-	-	-	-	
620508	Canterbury Terrace, London	22	0.09	0.05	-	8	NA	R	T	-	-	-	-	
620509	Canterbury Terrace, London	18	0.07	0.03	-	32	NA	R	T	-	-	-	-	
620511	Canterbury Terrace, London	13	0.05	0.02	-	16	NA	R	T	-	-	-	-	
620522	Gorefield Place, Kilburn	12	0.04	0.02	-	51	NA	R	T	-	-	-	-	
620524	Canterbury Road, London	14	0.05	0.02	-	113	NA	R	T	-	-	-	-	
620529	Cambridge Avenue, London	12	0.04	0.02	-	8	NA	R	T	-	-	-	-	
620533	Brondesbury Villas, London	10	0.05	0.02	-	18	NA	R	T	-	-	-	-	
620541	Brondesbury Villas, London	14	0.05	0.03	-	33	NA	R	T	-	-	-	-	
620542	Brondesbury Villas, London	11	0.04	0.02	-	25	NA	R	T	-	-	-	-	
620543	Brondesbury Villas, London	10	0.04	0.02	-	22	NA	R	T	-	-	-	-	
620546	Brondesbury Villas, London	13	0.05	0.02	-	10	NA	R	T	-	-	-	-	
620547	Brondesbury Villas, London	12	0.04	0.02	-	5	NA	R	T	-	-	-	-	
620548	Brondesbury Villas, London	12	0.04	0.02	-	5	NA	R	T	-	-	-	-	
620550	Brondesbury Villas, London	10	0.04	0.02	-	41	NA	R	T	-	-	-	-	
620551	Coventry Close, Kilburn	20	0.07	0.04	-	64	NA	R	T	-	-	-	-	
620552	Cambridge Avenue, London	14	0.05	0.02	-	8	NA	R	T	-	-	-	-	
620553	Cambridge Avenue, London	17	0.06	0.03	-	8	NA	R	T	-	-	-	-	
620554	Cambridge Avenue, London	21	0.08	0.04	-	44	NA	R	T	-	-	-	-	
620555	Brondesbury Villas, London	10	0.04	0.02	-	35	NA	R	T	-	-	-	-	
620569	Kilburn Bridge, London	12	0.04	0.02	-	2	NA	R	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620570	Brondesbury Villas, London	10	0.04	0.02	-	8	NA	R	T	-	-	-	-	
620571	Kilburn High Road, London	9	0.04	0.02	-	5	NA	R	T	-	-	-	-	
620572	Cambridge Avenue, London	20	0.07	0.03	-	1	NA	R	T	-	-	-	-	
620579	Cambridge Avenue, London	15	0.05	0.03	-	20	NA	R	T	-	-	-	-	
620580	Cambridge Avenue, London	15	0.05	0.03	-	1	NA	R	T	-	-	-	-	
620581	Oxford Road, London	12	0.04	0.02	-	8	NA	R	T	-	-	-	-	
620582	Kilburn High Road, London	17	0.06	0.03	-	6	NA	R	T	-	-	-	-	
620584	Cambridge Avenue, London (also committed development ref CFA4/1)	21	0.08	0.04	-	1 (1)	NA	R (CD)	T	-	-	-	-	
621925	Cullen Way, London	14	0.02	0.01	-	3	NA	R	T	-	-	-	-	
621926	Cullen Way, London	11	0.02	0.01	-	1	NA	R	T	-	-	-	-	
620002	British Broadcasting Corporation, Boden House, Victoria Road, London, (Television Studio)	2	0.01	0.00	-	2	B	G2/V3	T	-	-	-	-	
620093	School Road, London, (General Commercial)	1	0.01	0.00	-	1	B	G4/V3	T	-	-	-	-	
620094	School Road, London, (General Commercial)	4	0.01	0.01	-	1	B	G4/V3	T	-	-	-	-	
620095	School Road, London, (General Commercial)	5	0.01	0.01	-	1	B	G4/V3	T	-	-	-	-	
620099	Acton Business Centre, School Road, London, (Office)	0	0.01	0.00	-	14	B	G4/V3	T	-	-	-	-	
620099	Acton Business Centre, School Road,	0	0.01	0.00	-	49	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
	London, (General Commercial)													
620151	Scrubs Lane, London (General Commercial)	3	0.01	0.01	-	5	B	G4/V3	T	-	-	-	-	
620151	Scrubs Lane, London (General Commercial)	3	0.01	0.01	-	1	B	G4/V3	T	-	-	-	-	
620188	Rainham Road, London (Car Dealer)	9	0.03	0.01	-	1	B	G4/V3	T	-	-	-	-	
620191	Harrow Road, London (General Commercial)	20	0.06	0.03	-	2	B	G4/V3	T	-	-	-	-	
620198	Wakeman Road, London (Shopping)	10	0.03	0.02	-	1	B	G4/V3	T	-	-	-	-	
620201	Wakeman Road, London (General Commercial)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620204	Harrow Road, London (General Commercial)	15	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620211	Harrow Road, London, (Shopping)	11	0.03	0.02	-	1	B	G4/V3	T	-	-	-	-	
620217	The Australian Pilates Institute, The Chapel (Higher Education)	9	0.03	0.02	-	2	B	G4/V3	T	-	-	-	-	
620218	Kilburn Lane, London (Shopping)	13	0.05	0.02	-	3	B	G4/V3	T	-	-	-	-	
620226	Kilburn Lane, London (General Commercial)	13	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620227	Kilburn Lane, London (General Commercial)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620253	Buller Road, London (Shopping)	23	0.08	0.04	-	1	B	G4/V3	T	-	-	-	-	
620259	Chamberlayne Road, London (Shopping)	18	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620259	Chamberlayne Road, London, (General Commercial)	18	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620259	Chamberlayne Road, London, (General	18	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
	Commercial)													
620289	Kilburn Lane, London, (General Commercial)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620291	Chamberlayne Road, London, (General Commercial)	7	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620291	Chamberlayne Road, London, (Shopping)	7	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620291	Chamberlayne Road, London, (Shopping)	7	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620293	Chamberlayne Road, London, (Estate Agency)	9	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620300	Salusbury Road, London, (Shopping)	13	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620300	Salusbury Road, London, (General Commercial)	13	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620300	Salusbury Road, London, (General Commercial)	13	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620300	Salusbury Road, London, (Shopping)	13	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620300	Queens Park Station, Salusbury Road, London, (General Commercial)	13	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620311	Queens Park Beauty Clinic, Salusbury Road, London, (Clinic)	9	0.05	0.02	-	1	B	G4/V2	T	-	-	-	-	
620311	Salusbury Road, London, (General Commercial)	9	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620311	Salusbury Road, London, (General Commercial)	9	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620312	Albert Road, London, (General Commercial)	19	0.07	0.04	-	1	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620315	Falcon Hotel, Kilburn Lane, London, (Hotel)	15	0.05	0.03	-	1	B	G4/V2	T	-	-	-	-	
620316	Albert Road, London, (British Legion Club)	23	0.10	0.05	-	1	B	G4/V3	T	-	-	-	-	
620319	William Dunbar House, Albert Road, London, (Local Government Office)	16	0.06	0.03	-	1	B	G4/V3	T	-	-	-	-	
620319	William Dunbar Community Resource Centre, Albert Road, London, (Community Centre)	16	0.06	0.03	-	1	B	G3/V3	T	-	-	-	-	
620320	Blessing Medical Centre, Kilburn Lane, London, (Health Centre)	18	0.07	0.04	-	1	B	G4/V3	T	-	-	-	-	
620320	Kilburn Lane, London, (General Commercial)	18	0.07	0.04	-	1	B	G4/V3	T	-	-	-	-	
620320	Kilburn Lane, London, (Shopping)	18	0.07	0.04	-	1	B	G4/V3	T	-	-	-	-	
620320	Kilburn Lane, London, (Post Office)	18	0.07	0.04	-	1	B	G4/V3	T	-	-	-	-	
620320	Kilburn Lane, London, (Café)	18	0.07	0.04	-	1	B	G4/V3	T	-	-	-	-	
620367	Kilburn Lane, London, (Office)	22	0.09	0.05	-	1	B	G4/V3	T	-	-	-	-	
620367	Kilburn Lane, London, (Shopping)	22	0.09	0.05	-	1	B	G4/V3	T	-	-	-	-	
620367	Kilburn Lane, London, (Hall)	22	0.09	0.05	-	1	B	G3/V3	T	-	-	-	-	
620367	Kilburn Lane, London, (General Commercial)	22	0.09	0.05	-	1	B	G4/V3	T	-	-	-	-	
620368	Wiggzaro Music Productions / Rollover Studios, Beethoven Street, London, (Shopping)	17	0.07	0.03	-	1	B	G2/V3	T	-	-	-	-	
620368	Beethoven Street, London, (General Commercial)	17	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620368	Beethoven Street, London, (Factory)	17	0.07	0.03	-	1	B	G4/V4	T	-	-	-	-	
620373	Park Mews, Kilburn Lane, London, (General Commercial)	13	0.05	0.02	-	3	B	G4/V3	T	-	-	-	-	
620373	Park Mews, Kilburn Lane, London, (General Commercial)	13	0.05	0.02	-	2	B	G4/V3	T	-	-	-	-	
620374	Beetroot 56 Ltd, Beethoven Street, London, (General Commercial)	23	0.10	0.05	-	1	B	G2/V3	T	-	-	-	-	
620374	Kilburn Lane, London, (Shopping)	23	0.10	0.05	-	1	B	G4/V3	T	-	-	-	-	
620374	Kilburn Lane, London, (Shopping)	23	0.10	0.05	-	1	B	G4/V3	T	-	-	-	-	
620375	Kilburn Lane, London, (General Commercial)	22	0.09	0.05	-	2	B	G4/V3	T	-	-	-	-	
620377	Wilberforce Primary School, Beethoven Street, London, (Primary School)	14	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620407	Sportsmedia Broadcasting Ltd, The Linen House, Kilburn Lane, London, (Television Studio)	14	0.05	0.03	-	19	B	G2/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (General Commercial)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (Shopping)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (Restaurant)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (General Commercial)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (General Commercial)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620410	Kilburn Lane Dental Surgery, Kilburn Lane, London, (Dental Surgery)	18	0.07	0.03	-	1	B	G4/V2	T	-	-	-	-	
620410	Merchant Archive, Kilburn Lane, London, (Library)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (General Commercial)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620410	Kilburn Lane, London, (Shopping)	18	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620416	Portnall Road, London, (General Commercial)	14	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620416	St. Lukes Yard, Bravington Road, London, (Shopping)	14	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620418	Kilburn Lane, London, (Shopping)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620418	Kilburn Lane, London, (General Commercial)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620418	Kilburn Lane, London, (General Commercial)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620418	Kilburn Lane, London, (General Commercial)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620418	Kilburn Lane, London, (General Commercial)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620418	Kilburn Lane, London, (Shopping)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620439	Denmark Road, London, (Shopping)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620450	Queens Park Community Montessori School, Winterleys Community Hall, Albert Road, London, (School)	16	0.06	0.03	-	2	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620453	EQ Studios / Junga Music Studios, Kilburn Lane, London, (General Commercial)	14	0.05	0.03	-	2	B	G2/V3	T	-	-	-	-	
620476	Beethoven Street, London, (General Commercial)	14	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620487	Chamberlayne Road, London, (Trade Distribution)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620487	Chamberlayne Road, London, (General Commercial)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620487	Chamberlayne Road, London, (Café)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620487	Chamberlayne Road, London, (Car Dealer)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620487	Chamberlayne Road, London, (Shopping)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620487	Chamberlayne Road, London, (Office)	14	0.05	0.02	-	1	B	G4/V3	T	-	-	-	-	
620489	The Quadrant, Kilburn Lane, London, (Shopping)	13	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620510	Canterbury Works, Canterbury Road, London, (Office)	15	0.05	0.03	-	6	B	G4/V3	T	-	-	-	-	
620523	St. Mary's RC Primary School, Canterbury Road, London, (Primary School)	23	0.08	0.04	-	1	B	G4/V3	T	-	-	-	-	
620540	Community Centre, Denmark Road, Kilburn, (Community Centre)	15	0.05	0.03	-	1	B	G3/V3	T	-	-	-	-	
620544	Kilburn Delivery Office, Coventry Close, London, (Post Office)	18	0.06	0.03	-	1	B	G4/V3	T	-	-	-	-	
620555	Villas Nursery, Brondesbury Villas, London, (Pre School Education)	10	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620568	Kilburn Bridge, London, (Financial And Professional Services)	15	0.05	0.03	-	2	B	G4/V3	T	-	-	-	-	
620568	Kilburn Bridge, London, (Shopping)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620568	Kilburn Bridge, London, (Café)	15	0.05	0.03	-	1	B	G4/V3	T	-	-	-	-	
620569	Kilburn Bridge, London, (Office)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620569	Kilburn Bridge, London, (Café)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620569	Kilburn Bridge, London, (General Commercial)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620569	Kilburn Bridge, London, (Shopping)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620569	Kilburn Bridge, London, (General Commercial)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620569	Simon Rhodes Chiropodist, Kilburn High Road, London, (Clinic)	12	0.04	0.02	-	1	B	G4/V2	T	-	-	-	-	
620569	Kilburn Bridge, London, (General Commercial)	12	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620571	Kilburn Bridge House, Kilburn High Road, London, (Shopping)	9	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620571	Kilburn High Road, London, (General Commercial)	9	0.04	0.02	-	1	B	G4/V3	T	-	-	-	-	
620572	Kilburn High Road, London, (Shopping)	20	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620572	Cambridge Avenue, London, (General Commercial)	20	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	
620572	Kilburn Job Centre, Cambridge Avenue, London, (Job Centre)	20	0.07	0.03	-	1	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
620582	Oxford Road, London, (General Commercial)	17	0.06	0.03	-	1	B	G4/V3	T	-	-	-	-	
620582	Kilburn High Road, London, (General Commercial)	17	0.06	0.03	-	2	B	G4/V3	T	-	-	-	-	
620582	Kilburn High Road, London, (Shopping)	17	0.06	0.03	-	1	B	G4/V3	T	-	-	-	-	
620582	Kilburn High Road, London, (Restaurant)	17	0.06	0.03	-	1	B	G4/V3	T	-	-	-	-	
620582	Kilburn High Road, London, (General Commercial)	17	0.06	0.03	-	1	B	G4/V3	T	-	-	-	-	
620584	Kilburn High Road, London, (General Commercial)	21	0.08	0.04	-	1	B	G4/V3	T	-	-	-	-	
620584	Dental Surgery, Kilburn High Road, London, (Dental Surgery)	21	0.08	0.04	-	2	B	G4/V2	T	-	-	-	-	
620584	Cambridge Avenue, London, (Car Dealer)	21	0.08	0.04	-	1	B	G4/V3	T	-	-	-	-	
620584	Cambridge Avenue, London, (Shopping)	21	0.08	0.04	-	1	B	G4/V3	T	-	-	-	-	
620584	Kilburn Clinic, Cambridge Avenue, London, (Office)	21	0.08	0.04	-	1	B	G4/V3	T	-	-	-	-	
621919	Park Royal Road, London, (General Commercial)	20	0.03	0.02	-	1	B	G4/V3	T	-	-	-	-	
621921	Cullen Way, London, (General Commercial)	12	0.02	0.01	-	3	B	G4/V3	T	-	-	-	-	
621923	Park Royal Business Centre, Park Royal Road, London, (General Commercial)	8	0.01	0.01	-	37	B	G4/V3	T	-	-	-	-	
621925	Cullen Way, London, (Shopping)	14	0.02	0.01	-	1	B	G4/V3	T	-	-	-	-	
621926	Cullen Way, London, (General Commercial)	11	0.02	0.01	-	2	B	G4/V3	T	-	-	-	-	
621927	Sunbeam Road, London, (General	6	0.01	0.01	-	2	B	G4/V3	T	-	-	-	-	

Assessment location		Impact criteria				Significance criteria								Significant effect
ID	Area represented	Ground-borne sound level dB L_{pASmax}	VDV $m/s^{1.75}$ Daytime (07:00 – 23:00)	VDV $m/s^{1.75}$ Night time (23:00 – 07:00)	% increase or decrease in VDV	Number of impacts represented	Type of effect	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation effect	
	Commercial)													
621929	Sunbeam Road, London, (General Commercial)	14	0.02	0.01	-	1	B	G4/V3	T	-	-	-	-	
621932	Sunbeam Road, London, (General Commercial)	8	0.01	0.01	-	1	B	G4/V3	T	-	-	-	-	
621932	Sunbeam Road, London, (General Commercial)	8	0.01	0.01	-	1	B	G4/V3	T	-	-	-	-	

Impact summary

4.3.3 The operational ground-borne noise and vibration impacts identified in Table 1 are summarised in Table 2.

Table 2: Summary of operational ground-borne noise and vibration impacts

	Number of ground-borne sound impacts			
	Low	Medium	High	Very High
Residential properties	0	0	0	0
Non-residential properties	0			
	Number of ground-borne vibration impacts			
	Minor	Moderate	Major	Risk of building damage
Residential properties	0	0	0	0
Non-residential properties	0			0

Airborne sound: direct impacts and effects

4.3.4 The direct effects from the operation of the Proposed Scheme as well as any new, amended or altered roads or railway lines, which are identified as part of the scheme, are presented in Table 3.

4.3.5 The assessment information, impact criteria and significance criteria for the assessment of the incorporated mitigation case at residential and non-residential receptors are presented in Table 3. The results should be considered in conjunction with the information contained in map series Sv-02 in the CFA04 Volume 5 sound, noise and vibration map book.

4.3.6 Explanation of the Table 3 information is provided in Appendix 5: SV-001-000, with the following additional notes.

	Where the significant effect column is marked, then a significant effect is identified at the referenced group of dwellings, or individual residential or non-residential receptor.
	Yellow denotes a minor impact at a residential building – a change is of 3-5 dB
	Orange denotes a moderate impact at a residential building – a change is of 5-10 dB
	Red denotes a major impact at a residential building – a change is of >10 dB
*	Day - $L_{pAeq,07:00-23:00}$
**	Night - $L_{pAeq,23:00-07:00}$
***	Max - L_{pAFmax} In the Proposed Scheme only column, two values are presented. The first is the value for the HS2 mitigated train and the second is the value for the TSI compliant train. For further information refer to Volume 5: Appendix SV-001-000.
****	Where the Proposed Scheme modifies an existing source, i.e. road or railway realignments, the *Proposed Scheme only* level in the table includes the sound from the modified source. In this situation the *Do something (Opening year baseline + Year 15 traffic)* level has been corrected so as to not double count the sound associated with the road or railway on its new and existing alignment.
A	Adverse effect
B	For non-residential receptors further detail about the type of effect is set out in the text of Appendix SV-001-000.
CD	Committed Development. The value in brackets in the number of impacts represented column is

the value with the committed development.

G (G1)Theatres, large auditoria and concert halls, (G2) Sound recording and broadcast studios, (G3) Places of meeting for religious worship, courts, cinemas, lecture theatres, museums and small auditoria or halls, (G4) Schools, colleges, hospitals, hotels and libraries, and (G5) Offices and general commercial premises

H High existing ambient sound level. Defined as >65dB$L_{Aeq,\ day}$ and/or >55dB$L_{Aeq,\ night}$

L Low existing ambient sound level. Defined as <42dB$L_{Aeq,\ day}$ and/or <32dB$L_{Aeq,\ night}$

LD Landscape receptor

NA Generally no adverse effect

NI The receptor is predicted to qualify for mitigation, which shall be provided to the specification defined in the Noise Insulation (Railways and other Guided Rail Systems) Regulations 1996

R Residential

RM Residential mooring

S Significant adverse effect

U Unacceptable adverse effect

A change of 3dB or greater has been identified however, the assessment methodology only defines an impact where the absolute sound level from the Proposed Scheme is greater or equal to 50 dB $L_{pAeq,\ 23:00-07:00}$ during the daytime or 40 dB $L_{pAeq,\ 07:00-23:00}$ at night. At the receptor denoted the absolute level condition is not met and therefore no impact is identified.

~ The forecast adverse effects are not considered to be significant on a community basis (further information on methodology is provided in Volume 5: Appendix SV-001-000).

$ A change of 3dB or greater has been identified however, the impact methodology for non-residential receptors includes a screening criteria for G3 building use of 50 dB $L_{pAeq,07:00-23:00,}$ for G4 building use 55 dB $L_{pAeq,07:00-23:00}$ and 45 dB $L_{pAeq,23:00-07:00}$, for G5 building use 55 dB $L_{pAeq,07:00-23:00}$. At the receptor denoted the screening criteria is not met and therefore no impact is identified. Further information is provided in Volume 5: Appendix SV-001-000.

^ The impact methodology has either identified an impact at a receptor which based upon further qualitative information does not gives rise to a significant effect. Further information is provided at the end of this Appendix.

Table 3: Operational airborne sound level, noise impacts and effects

Assessment Location		Impact criteria										Significance criteria								
ID	Area represented	Proposed Scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
518427	Wells House Road, London	41	32	37/40	70	67	78	70	67	0	0	A	42	R	T	H	-	-	-	
518427	Wells House Road, London (also committed development ref CFA4/42)	41	32	37/40	70	67	78	70	67	0	0	A	8(8)	R (CD)	T	H	-	-	-	
519065	Midland Terrace, London	41	31	37/40	56	53	62	56	53	0	0	A	98	R	T	-	-	-	-	
700045	Wells House Road, London	53	47	32/35	56	49	60	58	51	2	2	A	9	R	T	-	-	-	-	
700047	Wells House Road, London	53	46	40/43	56	49	60	57	51	2	2	A	27	R	T	-	-	-	-	
700048	Old Oak Common Lane, East Acton	28	18	23/26	48	40	53	48	40	0	0	A	8	R	T	-	-	-	-	
700049	Braybrook Road, East Acton	28	19	24/27	48	40	53	48	40	0	0	A	16	R	T	-	-	-	-	
700050	Braybrook Road, East Acton	27	18	23/26	48	40	53	48	40	0	0	A	8	R	T	-	-	-	-	
700051	Braybrook Road, East Acton	26	17	22/25	48	40	53	48	40	0	0	A	16	R	T	-	-	-	-	
700052	Wells House Road, London	36	26	32/35	55	51	61	55	51	0	0	A	26	R	T	-	-	-	-	
700056	Midland Terrace, London	35	26	31/34	56	53	62	56	53	0	0	A	24	R	T	-	-	-	-	

Direct impact - Summary

4.3.7 The operational airborne noise impacts identified in Table 3 are summarised in Table 4.

Table 4: Summary of operational airborne sound impacts

Receptor	Number of impacts		
	Minor	Moderate	Major
Residential properties	0	0	0
Non-residential properties	0	0	0
Quiet areas	None	None	None

4.4 Assessment of impacts and effects

Residential receptors: direct effects - individual buildings

4.4.2 The mitigation measures will reduce airborne noise, ground-borne noise and ground-borne vibration inside all dwellings such that it will not reach a level where it would significantly affect residents.

Residential receptors: direct effects –communities

4.4.3 The avoidance and mitigation measures in this area will avoid ground-borne noise and vibration adverse effects on all residential communities.

Residential receptors: indirect effects

4.4.4 Changes in road traffic due to the Proposed Scheme are predicted to cause adverse noise effects along the following local roads:

- Old Oak Common Lane, between Victoria Road and Wulfstan Street, increased road traffic noise levels of approximately 1-2dB (further information on traffic flows is provided in Section 12: Traffic and Transport);
- Old Oak Lane, between Victoria Road and Tubbs Road, increased road traffic noise levels of approximately 1-2dB (further information on traffic flows is provided in Section 12: Traffic and Transport); and
- Du Cane Road, increased road traffic noise levels of approximately 1-2dB (further information on traffic flows is provided in Section 12: Traffic and Transport).

4.4.5 The above roads, particularly those with relatively low flows compared to surrounding roads and/or those affected by other ambient (traffic and non-traffic) sources, the full magnitude of the predicted noise level changes presented are unlikely to occur at nearby residential receptors.

4.4.6 The changes in noise levels resulting from the changes in road traffic are unlikely to affect the acoustic character of the area such that there is a perceived adverse change in the quality of life. These effects are not considered significant when assessed on a community basis taking account of the local context.

4.4.7 The assessment of operational noise and vibration indicates that significant indirect effects on residential receptors are unlikely to occur in this area.

Non-residential receptors: direct effects

4.4.8 The assessment of operational noise and vibration indicates that significant direct effects on non-residential receptors are unlikely to occur in this area.

Non-residential receptors: indirect effects

4.4.9 Changes in road traffic due to the Proposed Scheme are predicted to cause adverse noise effects along the following local roads:

- Old Oak Common Lane, between Victoria Road and Wulfstan Street, increased road traffic noise levels of approximately 1-2dB (further information on traffic flows is provided in Section 12: Traffic and Transport); and,
- Old Oak Lane, between Victoria Road and Tubbs Road, increased road traffic noise levels of approximately 1-2dB (further information on traffic flows is provided in Section 12: Traffic and Transport)

4.4.10 The non-residential receptors on these roads are typical commercial and office premises which are currently subject to appreciable levels of road traffic noise. These effects are not considered significant when assessed taking account of the local context.

4.4.11 The assessment of operational noise and vibration indicates that significant indirect effects are unlikely to occur on non-residential receptors in this area.

Cumulative effects

4.4.12 Details of properties being currently developed which were afforded planning approval before the safeguarding date are presented in Volume 5: Appendix CT004-000. Within this area, the operational sound, noise or vibration associated with these developments in conjunction with the operation of the Proposed Scheme do not result in any significant cumulative effects.